

EFFECTIVE TEACHING PRACTICES: SUMMARY

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Cross Case Analysis

From 2004 to 2009, the Wake County Public School System (WCPSS) Evaluation and Research Department (E&R) in collaboration with the Curriculum and Instruction Department (C&I) conducted five studies of effective teaching practices:

1. Effective Biology Teaching: A Value Added Instructional Improvement Analysis Model:
<http://www.wcpss.net/evaluation-research/reports/2006/0528biology.pdf>
2. Improving Student Success in High School Algebra I by Identifying Successful Teachers and Schools:
http://www.wcpss.net/evaluation-research/reports/2008/0610algebra_full_study.pdf
3. Effective Teaching Practices in U.S. History
http://www.wcpss.net/evaluation-research/reports/2008/0705effective_us_history.pdf
4. Middle School Algebra I: Effective Instructional Strategies with Comparison to High School Practices:
http://www.wcpss.net/evaluation-research/reports/2009/0831ms_alg1.pdf
5. Effective Teaching Practices in English I:
<http://www.wcpss.net/evaluation-research/reports/2010/0906engl.pdf>

This cross-case analysis synthesizes the results, identifying overall effective teaching practices.

Project Goals

These research studies had two main objectives:

- Study each subject, using a WCPSS Value-Added Instructional Improvement Analysis Model.
- Contribute to a series of studies that identify targets for overall systemic improvement.

Methods & Analysis

Teacher identification began with current teachers who had taught the subject for the three consecutive years prior to the study year. The number of teachers that met this criterion was about 30% of the total teacher pool in each subject:

- Biology: 43 teachers,
- Algebra I: 41 teachers,
- U.S. History: 29 teachers,
- Middle School Algebra I: 36 teachers, and
- English I: 42 teachers.

An average student residual was calculated for each teacher. Teachers were ranked on effectiveness from highest average to lowest. In each study, 7 to 10 teachers were labeled as “top teachers” and an equal number as “bottom teachers.” These teachers became the focus of analysis.

Results

Results were organized, analyzed, and reported slightly differently in each study, reflecting both a learning evolution as each report built on the one before and subject-specific differences. Despite these reporting differences, many common themes of effective teaching practices emerged. These themes can be organized into four main categories:

- high academic expectations for all students,
- thoughtful management of time and materials,
- learning-centered classrooms, and
- proactive planning.

Details are in the table on the back of this sheet.

Conclusions

It can be concluded that teachers with higher average WCPSS residuals do have a more complete package of instructional strategies than do their peers with lower residual averages. The five studies found clear evidence of excellence in teaching among top teachers. These top teachers focus on the Standard Course of Study helping students master it at the highest level possible.

Teachers' Possible Next Steps

- Study the standard course of study and EOC testing program.
- Plan with other teachers.
- Understand and implement Marzano and research-based instructional strategies.
- Use and/or develop a strategic course plan that addresses incoming students' deficits.
- Design tasks that use higher order thinking skills.
- Involve students actively in class.
- Hold high, rigorous expectations for all students.

School-based Leadership's Possible Next Steps

- Develop a school plan that aligns to the standard course of study, emphasizing rigor and relevance.
- Support and expect meaningful common planning for teachers.
- Share results data with teachers including effectiveness rosters and indices.

District-based Leadership's Possible Next Steps

- Make observations of effective schools and teachers that can be shared districtwide.
- Provide workshops on implementing Marzano and research-based instructional strategies.
- Support schoolwide improvement efforts based on top schools' models.
- Provide data to teachers and schools on their effectiveness.

See back for detailed table →



Common Generic Themes with Best Practices by Subject

| Subject | High Academic Expectations for All Students | Thoughtful Management of Time and Materials | Learning-Centered Classrooms | Proactive Planning |
|--------------------------------|---|---|---|--|
| Biology | <ul style="list-style-type: none"> ▶ Teachers focused on North Carolina Standard Course of Study. ▶ Teachers held frequent communication with students on progress toward goals. | <ul style="list-style-type: none"> ▶ Teachers resisted distractions that pulled them away from students. ▶ Most class-time was spent on teacher-controlled activities, mostly lecture and teacher-directed labs. ▶ Teachers used a common pacing guide, data-driven decisions, and designed a "year at a glance" document. | <ul style="list-style-type: none"> ▶ Teachers gave frequent assessments. ▶ Teachers held EOC review sessions by selected content. ▶ Teachers were accessible to students for extra help. | <ul style="list-style-type: none"> ▶ Teachers planned with other teachers. ▶ Teachers developed their own pacing guide and common assessments. ▶ Teachers collected their own data. ▶ Teachers planned their own activities. |
| Algebra I | <ul style="list-style-type: none"> ▶ Teachers used spiraled curriculum with 68% of time on new material daily. ▶ Teachers emphasized problem solving over rote memorization. ▶ Explanations by teachers were more concept-driven than skill-driven. | <ul style="list-style-type: none"> ▶ Teachers taught bell to bell. ▶ There were schoolwide plans for use of time and materials. ▶ Teachers wrote their own pacing guides. ▶ There were guidelines for use of textbooks and calculators. | <ul style="list-style-type: none"> ▶ Teachers created a classroom culture in which all students were free to ask questions, contribute, or offer explanations. ▶ Teachers used sustained feedback and gave meaning to homework. | <ul style="list-style-type: none"> ▶ Teachers planned with other teachers and developed their own pacing guide. ▶ Teachers prepared all course materials before the start of school. ▶ Schools had a support structure for teachers, including new teachers. |
| U. S. History | <ul style="list-style-type: none"> ▶ Teachers taught reading and note-taking in history daily. ▶ Teachers used higher-order thinking-skill questions and themes. ▶ Teachers placed acquisition of facts within a sense-making context. | <ul style="list-style-type: none"> ▶ Teachers maximized time on block schedule. ▶ Teachers controlled all students' activities. ▶ Teachers used lecture/discussion mostly. ▶ Teachers focused all student time on curricular activities. | <ul style="list-style-type: none"> ▶ Teachers made connections to current events and to students' lives. ▶ Teachers facilitated the use of student imaginations to connect into historical settings. ▶ Teachers made student-affirming comments. ▶ There was no time for teacher-centered comments. | <ul style="list-style-type: none"> ▶ Teachers prepared student guides, graphic organizers, warm-up questions, and many other supplementary teaching aids. ▶ Teachers planned with other teachers, focusing on concepts and strategies. |
| English I | <ul style="list-style-type: none"> ▶ Teachers assigned work at the application and analysis levels regularly. ▶ Teachers allowed opportunities for critical response. | <ul style="list-style-type: none"> ▶ All classroom time was well-managed. ▶ Students engaged in listening and speaking tasks with little in-class reading. | <ul style="list-style-type: none"> ▶ Teachers used Marzano research-based strategies. ▶ Teachers taught communication, reading, and study skills in preparation for success in all high school courses and in life after high school. | <ul style="list-style-type: none"> ▶ The teachers were comfortable with the North Carolina Standard Course of Study and were strategic in their approach to teaching it. ▶ Teachers connected class instruction to the English I EOC exam. |
| Middle School Algebra I | <ul style="list-style-type: none"> ▶ Top teachers held a significantly higher expectation for all students than did bottom teachers. ▶ Rigorous and challenging tasks were assigned to all students for all of class periods. ▶ Appropriate mathematical vocabulary was used by teachers and students. | <ul style="list-style-type: none"> ▶ There was little lecture, more whole-group discussion and small groups. ▶ There was structured classroom management that facilitated student ownership of learning. ▶ Teachers used frequent formative assessment to adjust instruction. | <ul style="list-style-type: none"> ▶ Teachers allowed inquiry, wrong answers, personal challenge, collaboration, and disequilibrium. ▶ Teachers and students were willing to risk being wrong. ▶ Teachers taught students to be mathematicians. ▶ Teachers listened carefully and used frequent formative assessment. | <ul style="list-style-type: none"> ▶ Teachers used shared planning time to create lesson plans that progressed linearly through the curriculum. ▶ Teachers used WCPSS pacing guide. ▶ Teachers ranked "basics" as the least important topic in their Algebra I class. |